



16P21

#1634

PATENT

ATTORNEY DOCKET NO: DIVER1280-14

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: William Michael Lafferty

Art Unit: 1634

Serial No.: 09/894,956

Examiner: Betty J. Forman

Filed: June 27, 2001

Title: CAPILLARY ARRAY-BASED SAMPLE SCREENING

Commissioner for Patents
Washington, D.C. 20231

TRANSMITTAL SHEET

Transmitted herewith for the above-identified application please find:

1. Information Disclosure Statement (2 pages);
2. Form PTO-1449 (3 pages);
3. Twenty-Three (23) United States Patents;
4. Eleven (11) Foreign Patents;
5. One (1) Other Documents;
6. Copy of Communication from Foreign Patent Office dated 1/31/03 (7 pgs);
7. Change of Attorney Address in Application (1 pg);
8. Check No. 533123 in the amount of \$180.00; and
9. Return Receipt Postcard.


CERTIFICATION UNDER 37 CFR §1.8	
I hereby certify that the documents referred to as enclosed herein are being deposited with the United States Postal Service as first class mail on this date, March 28, 2003, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231.	
Cecilia Tobin (Name of Person Mailing Paper)	
Cecilia Tobin (Signature)	March 28, 2003 (Date)

Applicant: William Michael Lafferty
Serial No.: 09/894,956
Filed: June 27, 2001
Page 2

Enclosed is Check No. 533123 in the amount of \$180.00 for the Information Disclosure Statement fee. The Commissioner is hereby authorized to charge any other required fees associated with the filing submitted herewith, or credit any overpayments to Deposit Account No. 50-1355. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

Date: March 28, 2003



Lisa A. Maile, J.D., Ph.D.

Registration No. 38,347

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USPTO CUSTOMER NUMBER 28213
GRAY CARY WARE & FREIDENRICH LLP
4365 Executive Drive, Suite 1100
San Diego, CA 92121-2133



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Commissioner for Patents
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. § 1.97, enclosed are references relating to the above-identified application. For the convenience of the Examiner, these references are listed on the attached Form PTO-1449 and a copy of each is enclosed herewith.

It is respectfully requested that these references be considered in the examination of this application and their consideration be made of written record in the application file.

03/31/2003 MBLAND 00000016 09894956

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180.00 OP

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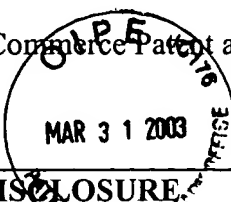
Lisa A. Maile, J.D., Ph.D.

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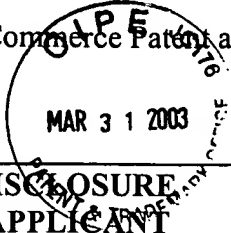
FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office 	Docket No. DIVER1280-14	Serial No.: 09/894, 956
	Applicant(s): William Michael Lafferty	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Filing Date: June 27, 2001	Group Art Unit: 1634

U.S. PATENT DOCUMENTS

EXAM. INITIALS		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
		4,276,048	06/30/81	Leaback			
		4,621,059	11/04/86	Rokugawa			
		5,853,984	12/29/88	Davis and Gold			
		5,274,240	12/28/93	Mathies et al.			
		5,584,982	12/17/96	Dovich and Zhang			
		5,670,113	09/23/97	Akong et al.			
		5,675,155	10/07/97	Pentoney, Jr. et al.			
		5,741,411	04/21/98	Yeung et al.			
		5,763,263	06/09/98	Dehlinger			
		5,777,096	07/07/98	Grossman et al.			
		5,790,727	08/04/98	Dhadwal et al.			
		5,833,827	11/10/98	Anazawa et al.			
		5,843,767	12/01/98	Beattie			
		5,938,908	08/17/99	Anazawa et al.			
		5,958,672	09/28/99	Short			
		6,027,873	02/22/00	Schellenberger et al.			
		6,048,444	04/11/00	Takahashi et al.			
		6,054,032	04/25/00	Haddad and Lee			
		6,083,763	07/04/00	Balch			

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office 	Docket No. DIVER1280-14	Serial No.: 09/894, 956
	Applicant(s): William Michael Lafferty	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Filing Date: June 27, 2001	Group Art Unit: 1634

		6,086,740	07/11/00	Kennedy			
		6,086,825	07/11/00	Sundberg et al.			
		6,090,251	07/18/00	Sundberg et al.			
		6,306,578 B1	10/23/01	Schellenberger and Liu			

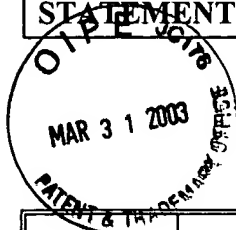
FOREIGN PATENT DOCUMENTS

EXAM. INITIALS	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION (YES/NO)
	WO 99/49315	09/30/90	PCT			
	WO 90/14590	11/29/90	PCT			
	WO 97/45730 A1	12/04/97	PCT			
	WO 98/04920	02/05/98	PCT			
	WO 98 28075 A1	07/02/98	PCT			
	WO 98/38490 A1	09/03/98	PCT			
	WO 98/58085	12/23/98	PCT			
	WO 99/10539	03/04/99	PCT			
	WO 99/34920	07/15/99	PCT			
	WO 99/39191 A1	09/05/99	PCT			
	WO 99/49294 A2	09/30/99	PCT			

EXAMINER	DATE CONSIDERED
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FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office	Docket No. DIVER1280-14	Serial No.: 09/894, 956
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Applicant(s): William Michael Lafferty Filing Date: June 27, 2001	Group Art Unit: 1634



OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages)

		Wittrup et al., "Microencapsulation Selection for Isolation of Yeast Mutants with Increased Secretion of <i>Aspergillus awamori</i> Glucoamylase," <i>Biotechnology and Bioengineering</i> , 42 (3):351-356 (1993)
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EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

To:
 GRAY CARY WARE & FREIDENRICH LLP
 Attn. Haile, Lisa.A.
 4365 Executive Drive, Suite 1100
 San Diego, California 92121-2133
 UNITED STATES OF AMERICA

INVITATION TO PAY ADDITIONAL FEES

(PCT Article 17(3)(a) and Rule 40.1)

PATENT DOCKETING

FEB 05 2003

REGISTERED MAIL

Applicant's or agent's file reference DIVER1280-17		Date of mailing (day/month/year) 31/01/2003
International application No. PCT/US 01/ 31806		International filing date (day/month/year) 10/10/2001
Applicant DIVERSA CORPORATION		

1. This International Searching Authority

- (i) considers that there are 13 (number of) inventions claimed in the international application covered by the claims indicated ~~XXXX~~ on the extra sheet:

and it considers that the international application does not comply with the requirements of unity of invention (Rules 13.1, 13.2 and 13.3) for the reasons indicated ~~XXXX~~ on the extra sheet:

- (ii) ☒ has carried out a partial international search (see Annex) ☐ will establish the international search report on those parts of the international application which relate to the invention first mentioned in claims Nos.:
1-46 complete

- (iii) will establish the international search report on the other parts of the international application only if, and to the extent to which, additional fees are paid

2. The applicant is hereby invited, within the time limit indicated above, to pay the amount indicated below:

EUR 945,00 x 12 = EUR 11.340,00
 Fee per additional invention number of additional inventions total amount of additional fees

Or, _____ x _____ = _____

The applicant is informed that, according to Rule 40.2(c), the payment of any additional fee may be made under protest, i.e., a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fee is excessive.

3. ☐ Claim(s) Nos. _____ have been found to be unsearchable under Article 17(2)(b) because of defects under Article 17(2)(a) and therefore have not been included with any invention.

Name and mailing address of the International Searching Authority



European Patent Office, P.B. 5818 Patentlaan 2
 NL-2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Anna S1lberg

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-46 complete

method for identifying a polynucleotide in a liquid phase by using a library of nucleic acid sequences from one organism and (a) labeled probe(s).

2. Claims: 48-94 complete

screening method of libraries of mixed populations defined by the wording of the mentioned claims above

3. Claims: 95-104 complete

method defined by the wording of the mentioned claims above

4. Claims: 105-145 complete

method defined by the wording of the mentioned claims above

5. Claims: 146-164 complete

method defined by the wording of the mentioned claims above

6. Claims: 165-175 complete

apparatus defined by the wording of the mentioned claims above.

7. Claims: 176-185 complete

capillary and array defined by the wording of the mentioned claims above

8. Claims: 186-200 complete

method for incubating a bioactivity as defined by the wording of the mentioned claims above

9. Claims: 201-203 complete

method defined by the wording of the mentioned claims above

10. Claims: 203-208 complete

recovery apparatus defined by the wording of the mentioned claims above

11. Claims: 209,210 complete

apparatus defined by the wording of the mentioned claims above

12. Claim : 211 complete

method defined by the wording of the mentioned claim above

13. Claim : 47 complete

method defined by the wording of the mentioned claim above

The application relates to a plurality of inventions, or groups of inventions, in the sense of Rule 13.1 PCT. They have been divided as defined above. If the applicant pays additional fees for one (or more) not yet searched group(s) of invention(s), then the further search(es) may reveal further prior art that gives evidence of a further lack of unity 'a posteriori' within one (or more) of the not yet searched group(s). In such a case only the first invention in this (each of these) group(s) of inventions, which is considered to lack unity of invention, will be the subject of a search.

No further invitation to pay further additional fees will be issued. This is because Article 17(3)(a) PCT stipulates that the ISA shall establish the International Search Report on those parts of the international application which relate to the invention first mentioned in the claims ('main invention') and for those parts which relate to inventions in respect of which the additional fees were paid. Neither the PCT nor the PCT guidelines provide a legal basis for further invitations to pay further additional search fees (W17/00, point 11 and W1/97, points 11-16).

The ISA is of the opinion that due to the fact that the inventions listed above are not linked by a single general inventive concept and due to their essential differences and due that furthermore no technical features can be distinguished which, in the light of the prior art, could be regarded as special in the sense of Rule 13.2 PCT the requirements of unity of invention as laid down in Rule 13.1 PCT is not fulfilled.

The ISA has searched the first invention.

1. The present communication is an Annex to the invitation to pay additional fees (Form PCT/ISA/206). It shows the results of the international search established on the parts of the international application which relate to the invention first mentioned in claims Nos. 1-46
2. This communication is not the international search report which will be established according to Article 18 and Rule 43.
3. If the applicant does not pay any additional search fees, the information appearing in this communication will be considered as the result of the international search and will be included as such in the international search report.
4. If the applicant pays additional fees, the international search report will contain both the information appearing in this communication and the results of the international search on other parts of the international application for which such fees will have been paid.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 10539 A (DIVERSA CORP) 4 March 1999 (1999-03-04) see whole doc. esp. claims and p.9, 1.16-26	1-46
X	WO 98 58085 A (KELLER MARTIN ; SHORT JAY M (US); DIVERSA CORP (US)) 23 December 1998 (1998-12-23) see whole doc. esp. p.12, 1.21-p.14 1.13,; p.8, 124-p.9, 1.7; cl.37	1-46
A	US 5 777 096 A (GROSSMAN PAUL DAVID ET AL) 7 July 1998 (1998-07-07) see whole doc. esp. claims	
A	WITTRUP K D ET AL: "Microencapsulation selection for isolation of yeast mutants with increased secretion of Aspergillus awamori glucoamylase" BIOTECHNOLOGY AND BIOENGINEERING. INCLUDING: SYMPOSIUM BIOTECHNOLOGY IN ENERGY PRODUCTION AND CONSERVATION, JOHN WILEY & SONS. NEW YORK, US, vol. 42, no. 3, 1993, pages 351-356, XP002151519 ISSN: 0006-3592 the whole document	
A	US 5 853 984 A (DAVIS KEN ET AL) 29 December 1998 (1998-12-29) see whole doc. esp. examples, cols.10 ff.	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *8* document member of the same patent family

Annex to Form PCT/ISA/206
COMMUNICATION RELATING TO THE RESULTS
OF THE PARTIAL INTERNATIONAL SEARCH

International Application No

PCT/US 01/31806

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 958 672 A (SHORT JAY M) 28 September 1999 (1999-09-28) see whole doc. esp. claims -----	

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9910539	A	04-03-1999	US 6057103 A	02-05-2000
			AU 741139 B2	22-11-2001
			AU 8923198 A	16-03-1999
			CA 2301601 A1	04-03-1999
			EP 1025262 A1	09-08-2000
			JP 2001514017 T	11-09-2001
			WO 9910539 A1	04-03-1999
			US 2002037505 A1	28-03-2002
WO 9858085	A	23-12-1998	AU 749587 B2	27-06-2002
			AU 8150298 A	04-01-1999
			EP 1009858 A1	21-06-2000
			JP 2002505590 T	19-02-2002
			US 2002080350 A1	27-06-2002
			US 2002102598 A1	01-08-2002
			US 2002150949 A1	17-10-2002
			WO 9858085 A1	23-12-1998
			US 6174673 B1	16-01-2001
			US 2001041333 A1	15-11-2001
			US 2002048809 A1	25-04-2002
			US 2001034040 A1	25-10-2001
			US 2002001809 A1	03-01-2002
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			US 2001034031 A1	25-10-2001
			US 2002015997 A1	07-02-2002
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			AT 173767 T	15-12-1998
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			DE 69322266 T2	02-06-1999
			DK 635069 T3	20-07-1998
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			JP 2775346 B2	16-07-1998
			JP 7505529 T	22-06-1995
			JP 2701092 B2	21-01-1998
			JP 8504082 T	07-05-1996
			WO 9320236 A1	14-10-1993
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			US 5624800 A	29-04-1997
			US 5989871 A	23-11-1999
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			US 5807682 A	15-09-1998
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			US 5683867 A	04-11-1997
			US 5475096 A	12-12-1995
			AU 6147096 A	30-12-1996
			EP 0832299 A1	01-04-1998
			WO 9641019 A1	19-12-1996
			AU 689087 B2	26-03-1998
			AU 5441194 A	26-04-1994

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5853984	A	CA 2145761 A1	14-04-1994
		EP 0668931 A1	30-08-1995
		JP 8501943 T	05-03-1996
		US 2002172962 A1	21-11-2002
		US 6124449 A	26-09-2000
		WO 9408050 A1	14-04-1994
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